

BOTANICAL/COMMERCIAL CLASSIFICATIONViola cornuta/Viola PlantVARIETAL DENOMINATIONcv. 'Sunvioho'

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## BACKGROUND OF THE VARIETY

The genus of *Viola* is *Violaceae* plants and has about 500 species of annuals, biennials, evergreen, and semi -  
10 evergreen and deciduous perennials found in varied habitats in temperature regions worldwide.

Each flower has 5 petals a spurred lower petal, 2 lateral petals and 2 upward-facing upper petals.

Many cultivars within the genus are informally  
15 referred to as garden pansies, violas they are all derived from the complex hybridization of *V.tricolour*, *V.lutea*, *V.cornuta*, and other species.

*Viola cornuta* has played an important role in the development of garden violas and violettas as a result of  
20 cross breeding with the garden pansy which *V.wittorockiana*.

*Viola cornuta* is stem prostrate, Leaves is narrow to broad ovate, base cordate to truncate, margin deeply segmented.

25 The female parent used in the crossing of 'SUNVIOHO' was '9V-39a' which is our breeding line and grown at Omi R&D Center of Suntory Flowers Ltd.

The pollen parent used in the crossing of 'SUNVIOHO' was 'Alpine Sun', Whose seeds were bought from Daiichi  
30 Seed Co., Ltd. (Japan).

## BREEDING PROCESS

First of all, crossing between '9V-39a' as female parent and 'Alpine Sun' as male parent was conducted at  
35 the Omi R&D Center of Suntory Flowers Ltd. April 2000. In May, some seeds were obtained from the crossing. The seeds were sown and grown there. In August 3 seedlings

were selected in view of having highly spreading habit with white petals from 20 seedlings obtained, and propagated by cutting. Those seedlings were carried out a trial by flower potting and bedding from October 2001, at the Omi R&D Center of Suntory Flowers Ltd. Finally one variety was selected in view of having long blooming time. The botanical characteristics of that plant were then examined, using similar variety 'Violetto Nive' and 'Alpine Summer' for comparison. As a result, it was concluded that this *Viola cornuta* plant is distinguishable from any other variety, whose existence is known to us, and uniform and stable in its characteristics. Then the new variety of *Viola cornuta* plant was named 'SUNVIOHO'.

Those of *Viola cornuta* plants, 'Alpine Sun' and '9V-39', are presently maintained at the Omi R&D Center of Suntory Flowers Ltd., located at 863-1, Aza-Iketani, Omori-cho, Yokaichi-shi, Shiga-ken, Japan.

This new and distinct variety of *Viola cornuta* plant, 'SUNVIOHO', was asexually reproduced by tissue culture at the aforementioned the Omi R&D Center of Suntory Flowers Ltd., and the homogeneity and stability thereof were confirmed.

## DESCRIPTION

In the following description, the color-coding is in accordance with the Horticultural Color Chart of The Royal Horticultural Society, London, England (R.H.S. Color Chart).

The botanical characteristics of the female parent plant '9V-39a' used in the crossing of 'SUNVIOHO' are as follows.

### Plant:

Stemmed or non-stemmed - Stemmed  
Growth habit - Spreading  
Height - 9 cm  
Plant cover - 49 cm

Stem:

Length - 36 cm

Branching - Much

Pubescence - Present

5 Leaf:

Overall form - Long oblong

Apex form - Acute

Base form - Acute

Serrated, lobed or not - Serrated or lobed

10 Margin - Serrated or slightly lobed

Length - 1.9 cm

Width - 1.2 cm

Color of upper surface - Grayish olive green (R.H.S.  
137A)

15 Color of under surface - Moderate yellow green (R.H.S.  
137C)

Variegation - Absent

Leaf luster - Lustrous

Vein - Distinct

20 Petiole length - 1.4 cm

Stipule length - 1.8 cm

Flower:

Peduncle length - 7.5 cm

Peduncle thickness - Thin

25 Peduncle color - Strong yellow green (R.H.S. 144B)

Flower form - Vertically oblong

Flowering direction - Upward

Longitudinal diameter - 3.2 cm

Horizontal diameter - 3.0 cm

30 Ruffle of petal margin - Weakly ruffled

Petal curving - Very weak

Petal number - Single

Flower color - Self-colored

<Upper petal>

35 Form - Round

Size - 1.6x1.6 cm

Petal color - Self-colored

- Ground color - Pale yellow green (R.H.S. 157A)  
Blotch - Absent
- <Side petal>  
Form - Ovate  
5      Size - 1.3×1.5 cm  
Petal color - Self-colored  
Ground color - Pale yellow green (R.H.S. 157A)  
Blotch - Absent
- <Lower petal>  
10      Form - Cordate  
Size - 1.9×1.9 cm  
Petal color - Self-colored  
Ground color - Pale yellow green (R.H.S. 157A)  
Blotch - Absent
- 15      Eye color - Vivid reddish yellow (R.H.S. 14A)  
Eye size - Medium  
Thickness of petal - Medium  
Spur length - Longer than the sepal appendage  
Sepal - Short
- 20      Number of flowers - Many
- Seed:  
Color - Deep brown
- Physical property:  
Flowering time - Late
- 25      Fragrance - Faint or weak
- <Resistance>  
Rain - Strong  
Cold - Strong  
Heat - Medium
- 30      Disease - Strong  
Pest - Strong

35      And the botanical characteristics of the male parent  
plant 'Alpine Sun' used in the crossing of 'SUNVIOHO' are  
as follows.

Plant:

Stemmed or non-stemmed - Stemmed

Growth habit - Spreading

Height - 8 cm

Plant cover - 35 cm

5 Stem:

Length - 25 cm

Branching - Much

Pubescence - Present

Leaf:

10 Overall form - Long oblong

Apex form - Obtuse

Base form - Acute

Serrated, lobed or not - Serrated or lobed

Margin - Serrated or slightly lobed

15 Length - 2.1 cm

Width - 1.0 cm

Color of upper surface - Grayish olive green (R.H.S.

137A)

Color of under surface - Moderate yellow green (R.H.S.

20 137C)

Variegation - Absent

Leaf luster - Matte

Vein - Apparent

Petiole length - 2.2 cm

25 Stipule length - 2.1 cm

Flower:

Peduncle length - 8.0 cm

Peduncle thickness - Thin

Peduncle color - Strong yellow green (R.H.S. 144B)

30 Flower form - Vertically oblong

Flowering direction - Upward

Longitudinal diameter - 3.3 cm

Horizontal diameter - 2.5 cm

Ruffle of petal margin - Flat

35 Petal curving - Weak

Petal number - Single

Flower color - Self-colored

<Upper petal>

Form - Round

Size - 1.1x1.0 cm

Petal color - Self-colored

5 Ground color - Vivid yellow (R.H.S. 9B)

Blotch - Absent

<Side petal>

Form - Ovate

Size - 1.2x1.0 cm

10 Petal color - Self-colored

Ground color - Vivid yellow (R.H.S. 9B)

Blotch - Absent

<Lower petal>

Form - Cordate

15 Size - 1.4x1.3 cm

Petal color - Self-colored

Ground color - Vivid yellow (R.H.S. 9A)

Blotch - Absent

Eye color - Vivid yellow (R.H.S. 13A)

20 Eye size - Small

Thickness of petal - Thin

Spur length - Longer than the sepal appendage

Sepal - Short

Number of flowers - Many

25 Seed:

Color - Deep brown

Physical property:

Flowering time - Late

Fragrance - Absent

30 <Resistance>

Rain - Medium

Cold - Strong

Heat - Medium

Disease - Strong

35 Pest - Strong

The botanical characteristics of the similar variety 'Vioretto Nive' used for examination as a comparison are as follows.

Plant:

- 5      Stemmed or non-stemmed - Stemless
- Growth habit - Spreading
- Height - 7 cm
- Plant cover - 55 cm

Stem:

- 10     Length - 37 cm
- Branching - Much
- Pubescence - Present

Leaf:

- Overall form - Lanceolate
- 15     Apex form - Acute
- Base form - Acute
- Serrated, lobed or not - Serrated or lobed
- Margin - Serrated or slightly lobed
- Length - 2.8 cm
- 20     Width - 1.5 cm
- Color of upper surface - Grayish olive green (R.H.S. 137B)
- Color of under surface - Moderate yellow green (R.H.S. 137C)
- 25     Variegation - Absent
- Leaf luster - Matte
- Vein - Apparent
- Petiole length - 1.2 cm
- Stipule length - 2.5 cm
- 30     Flower:
- Peduncle length - 10 cm
- Peduncle thickness - Thin
- Peduncle color - Strong yellow green (R.H.S. 144B)
- Flower form - Vertically oblong
- 35     Flowering direction - Upward
- Longitudinal diameter - 4.0 cm
- Horizontal diameter - 3.4 cm

- Ruffle of petal margin - Weakly ruffled  
Petal curving - Weak  
Petal number - Single  
Flower color - Self-colored
- 5 <Upper petal>  
Form - Round  
Size - 2.0x2.0 cm  
Petal color - Self-colored  
Ground color - Pale yellow green (R.H.S. 157A)
- 10 Blotch - Absent  
<Side petal>  
Form - Ovate  
Size - 1.5x1.5 cm  
Petal color - Self-colored  
15 Ground color - Pale yellow green (R.H.S. 157A)  
Blotch - Absent  
<Lower petal>  
Form - Cordate  
Size - 1.6x2.1 cm  
20 Petal color - Self-colored  
Ground color - Pale yellow green (R.H.S. 157A)  
Blotch - Absent  
Eye color - Vivid yellow (R.H.S. 13A)  
Eye size - Small  
25 Thickness of petal - Thin  
Spur length - Longer than the sepal appendage  
Sepal - Short  
Number of flowers - Many
- Seed:  
30 Color - Deep brown  
Physical property:  
Flowering time - Intermediate  
Fragrance - Faint or weak  
<Resistance>  
35 Rain - Strong  
Cold - Strong

Heat - Medium  
Disease - Strong  
Pest - Strong

- 5           The botanical characteristics of the similar variety 'Alpine Summer' used for examination as a comparison are as follows.

Plant:

- Stemmed or non-stemmed - Stemmed  
10        Growth habit - Spreading  
          Height - 10 cm  
          Plant cover - 52 cm

Stem:

- Length - 44 cm  
15        Branching - Much  
          Pubescence - Present

Leaf:

- Overall form - Lanceolate  
          Apex form - Acute  
20        Base form - Acute  
          Serrated, lobed or not - Serrated or lobed  
          Margin - Serrated or slightly lobed  
          Length - 2.3 cm  
          Width - 1.1 cm  
25        Color of upper surface - Grayish olive green (R.H.S. 137A)  
          Color of under surface - Moderate yellow green (R.H.S. 137C)  
          Variegation - Absent  
30        Leaf luster - Matte  
          Vein - Apparent  
          Petiole length - 0.9 cm  
          Stipule length - 2.0 cm

Flower:

- 35        Peduncle length - 8.0 cm  
          Peduncle thickness - Thin  
          Peduncle color - Strong yellow green (R.H.S. 144A)

- Flower form - Vertically oblong  
Flowering direction - Horizontal  
Longitudinal diameter - 2.6 cm  
Horizontal diameter - 2.1 cm  
5 Ruffle of petal margin - Flat  
Petal curving - Weak  
Petal number - Single  
Flower color - Multi-colored  
<Upper petal>  
10 Form - Elliptical  
Size - 1.3x1.0 cm  
Petal color - Self-colored  
Ground color - Strong purple (R.H.S. 86B)  
Blotch - Absent  
15 <Side petal>  
Form - Ovate  
Size - 1.0x0.7 cm  
Petal color - Bi-colored  
Ground color - Vivid yellow (R.H.S. 9B)  
20 Blotch - Absent  
Margin color - Light purple (R.H.S. 85B)  
Vein color - Dark reddish purple (R.H.S. 79A)  
<Lower petal>  
Form - Cordate  
25 Size - 0.9x1.2 cm  
Petal color - Self-colored  
Ground color - Vivid yellow (R.H.S. 9B)  
Blotch - Absent  
Vein color - Dark reddish purple (R.H.S. 79A)  
30 Eye color - Vivid yellow (R.H.S. 13A)  
Eye size - Small  
Thickness of petal - Thin  
Spur length - Longer than the sepal appendage  
Sepal - Short  
35 Number of flowers - Many  
Seed:

Color - Deep brown

Physical property:

Flowering time - Intermediate

Fragrance - Faint or weak

5 <Resistance>

Rain - Strong

Cold - Strong

Heat - Medium

Disease - Strong

10 Pest - Strong

#### SUMMARY OF THE NEW VARIETY

The new variety of viola plant named 'SUNVIOHO', which is the first vegetative propagated variety, has a spreading plant habit with very long epigeal stem. The plant height is low and the branching is abundant. The flowers of the new variety are vertically oblonged and very small, and the color of flower is pale yellow green with vivid yellow eye. The new variety has a high resistance to cold, pests and diseases.

#### BRIEF DESCRIPTION OF THE DRAWING

FIG.1 is a photograph giving a partial view of the new variety of *Viola cornuta* plant 'SUNVIOHO' planted in pots.

FIG.2 is a photograph of flowers of the new variety of *Viola cornuta* plant 'SUNVIOHO'.

#### DESCRIPTION OF THE VARIETY

The botanical characteristics of this new and distinct variety of *Viola cornuta* plant named 'SUNVIOHO' are as follows.

Plant:

Stemmed or non-stemmed - Stemmed

35 Growth habit - Spreading

Height - 10 cm

Plant cover - 90 cm

Stem:

Length - 50 cm  
Branching - Very much  
Pubescence - Present

5 Leaf:

Overall form - Long oblong  
Apex form - Obtuse  
Base form - Acute  
Serrated, lobed or not - Serrated or lobed  
10 Margin - Serrated or slightly lobed  
Length - 4.0 cm  
Width - 2.0 cm  
Color of upper surface - Grayish olive green (R.H.S.  
137A)  
15 Color of under surface - Moderate yellow green (R.H.S.  
137C)  
Variegation - Absent  
Leaf luster - Matte  
Vein - Apparent  
20 Petiole length - 4.0 cm  
Stipule length - 1.5 cm

Flower:

Peduncle length - 12 cm  
Peduncle thickness - Thin  
25 Peduncle color - Strong yellow green (R.H.S. 144A)  
Flower form - Vertically oblong  
Flowering direction - Upward  
Longitudinal diameter - 3.5 cm  
Horizontal diameter - 2.8cm  
30 Ruffle of petal margin - Weakly ruffled  
Petal curving - Weak  
Petal number - Single  
Flower color - Self-colored  
<Upper petal>  
35 Form - Round  
Size - 1.7x1.7 cm  
Petal color - Self-colored

Ground color - Pale yellow green (R.H.S. 157A)

Blotch - Absent

<Side petal>

Form - Ovate

5      Size - 1.5x1.3 cm

Petal color - Self-colored

Ground color - Pale yellow green (R.H.S. 157A)

Blotch - Absent

<Lower petal>

10      Form - Cordate

Size - 1.5x1.8 cm

Petal color - Self-colored

Ground color - Pale yellow green (R.H.S. 157A)

Blotch - Absent

15      Eye color - Vivid yellow (R.H.S. 13A)

Eye size - Small

Thickness of petal - Thin

Spur length - Longer than the sepal appendage

Sepal - Short

20      Number of flowers - Many

Seed:

Color - Deep brown

Physical property:

Flowering time - Early

25      Fragrance - Faint or weak

<Resistance>

Rain - Strong

Cold - Strong

Heat - Medium

30      Disease - Strong

Pest - Strong

This new variety of *Viola cornuta* plant 'SUNVIOHO' is most suitable for flower bedding and potting, hanging basket and ground cover.

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COMPARISON WITH SIMILAR VARIETY

The new variety of *Viola cornuta* plant 'SUNVIOHO' is different from a similar variety, 'Violetto Nive' in following points,

1. The plant width of 'SUNVIOHO' is wider than  
5 that of 'Violetto Nive'.
2. 'SUNVIOHO' has long oblong leaf while 'Violetto Nive' has lanceolate one.
3. The leaf color of upper surface of 'SUNVIOHO' is R.H.S.137A while that of 'Violetto Nive' is R.H.S.137B.
- 10 4. The longitudinal diameter of 'SUNVIOHO' is smaller than that of 'Violetto Nive'.
5. The side petal form of 'SUNVIOHO' is ovate while that of 'Violetto Nive' is round.
6. The flowering time of 'SUNVIOHO' is early while  
15 that of 'Violetto Nive' is intermediate.

The new variety of *Viola cornuta* plant 'SUNVIOHO' is different from a similar variety, 'Alpine Summer' in following points,

1. The plant width of 'SUNVIOHO' is wider than  
20 that of 'Alpine Summer'.
2. 'SUNVIOHO' has long oblong leaf while 'Alpine Summer' has lanceolate one.
3. The flowering direction of 'SUNVIOHO' is upward while that of 'Alpine Summer' is horizontal.
- 25 4. The ruffle of petal margin of 'SUNVIOHO' is weakly ruffled while that of 'Alpine Summer' is flat.
5. 'SUNVIOHO' has self-colored flower while 'Alpine Summer' has multi-colored one.
6. The color of upper petal of 'SUNVIOHO' is  
30 R.H.S.157A while that of 'Alpine Summer' is R.H.S.86B.
7. The color of side petal of 'SUNVIOHO' is R.H.S.157A while that of 'Alpine Summer' is R.H.S.9B with R.H.S.85B margin and R.H.S.79A vein.
8. The color of lower petal of 'SUNVIOHO' is  
35 R.H.S.157A while against that of 'Alpine Summer' is R.H.S.9B with R.H.S.79A vein.
9. The flowering time of 'SUNVIOHO' is early while

that of 'Alpine Summer' is intermediate.